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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,719	04/17/2001	Hajime Kimura	SEL 252	8125

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COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
SUITE 2850
200 WEST ADAMS STREET
CHICAGO, IL 60606

EXAMINER

NELSON, ALECIA DIANE

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 03/11/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,719

Applicant(s)

KIMURA ET AL.

Examiner

Alecia D. Nelson

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 3,6,9,14,17,20,23 and 27 is/are allowed.
6) ☒ Claim(s) 1,2,4,5,7,8,10-13,15,16,18,19,21,22 and 24-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 April 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. ***Claims 1, 2, 12, and 14*** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite that a clear period is provided during a period starting from the end of the sustain period of a sub frame period through a start of the address period in the next sub frame period. However, the disclosure states that this clear period is only provided when the address period is longer than the sustain period. The recited claims indicate that the clear period is applied to any to all of the sub frame periods. In this regard the claim is considered indefinite. Further it is not clear as to if there is a difference in n , which is known to represent the number of sub frame periods, and m , which should be defined as to what it represents. This also renders the claim indefinite. ***Claims 4, 5, 7, 8, 15, 16, 18, 19, 21, 22, 25, and 26*** are rejected for being dependent on a rejected base claim. All of the above listed claims will be rejected as best understood by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1, 2, 12, 13, 21, 22, 25, and 26** are rejected under 35 U.S.C. 102(e) as being anticipated by Kang et al. (U.S. Patent No. 6,353,423).

With reference to **claims 1, 2, 12, and 13** Kang et al. teaches a method of driving an electronic display (1), with one frame period comprising n sub-frame periods (H1-H256) (see column 3, lines 45-48, line 64-column 4, line 13), the n sub-frame periods each comprising address periods (Pa1-Pa256) and sustain periods (Ps1-Ps256), comprising the steps of inputting a first signal to a pixel comprising a light emitting element form a source signal line during each address period, wherein a capacitor storage line is maintained at a first potential; turning on the light emitting element during each sustain period, wherein the capacitor storage line is maintained at the first potential (see column 4, lines 35-47); providing a clear (reset) period (Pr1-Pr256) during a period from an end of the sustain period of a sub-frame period through until a start of the address period of a sub frame period wherein the capacitor storage line is maintained at a second potential (see column 4, line 55-column 5, line 2)

With reference to **claims 21, 22, 25, and 26** Kang et al. teaches that the electronic device is a plasma display panel which is known to be used in may different types of electronic devices (see Fig. 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. ***Claims 10, 11, and 24*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo (JP 2000-347621).

With reference to claims 10 and 11, Kondo teaches an electronic device comprising a source signal line side driver circuit (22), a gate signal line side driver circuit (23), and a pixel portion, wherein the pixel portion has a plurality of source signal lines (18), a plurality of gate signal lines (19), a plurality of current supply lines (13), a plurality of capacitor storage lines (14), and a plurality of pixels (12); each of the plurality of pixels has a switching transistor (17), an EL driving transistor (15); a capacitor

storage (16), and an EL element (12); the switching transistor 917) has a gate electrode electrically connected to the gate signal lines (see page 32,, lines 15-17); the switching transistor has a source region and a drain region one of which is electrically connected to the source signal line and the other of which is electrically connected to a gate electrode of the EL driving transistor (see page 32, lines 15-17, Fig. 1); and the EL driving transistor has a source region and a drain region one of which is electrically connected to the current supply line (13) and the other of which is electrically connected to one electrode of the EL element (12) (see Fig. 1).

Even though it is taught that the holding capacitor (16) is connected to the power source line (13) through the gate electrode of the driving TFT (15) and thereby providing the potential to be held by the capacitor, there is no disclosure of the driving TFT (15) being a capacitor storage line driving circuit, however, it is responsible for providing potentials to the capacitor storage line. Furthermore, allowing the potential of the capacitor storage line to change in accordance with a signal inputted from the drive circuit it well known in the art and conventional with any driver and signal line.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the usage of a storage capacitor line driving circuit responsible for providing potentials to the storage capacitor in order to provide the stored potentials to the EL this thereby providing a higher quality luminance of the EL element and reducing deterioration in the image or poor contrast on the screen.

With reference to **claim 11**, Kondo teaches that the holding capacitor line 914) is electrically connected to the capacitor storage driving circuit (ground) so that a signal having amplitude is inputted to the capacitor storage line from the capacitor storage line driving circuit (see page 44-45, paragraph 85).

With reference to **claim 24**, Kondo teaches an EL display device (1) which is known to those skilled in the art as an image display device which displays a dot matrix image in a two dimensional arrangement. Such an image displaying device is for displaying various kinds of images in an area such as a passenger room of a vehicle where light and darkness are remarkably changed (see page 11, paragraph 2).

8. **Claims 4, 5, 7, 8, 15, 16, 18, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang et al as applied to **claims 1, 2, 12, and 13** above, and further in view of Kondo.

With reference to **claims 4, 5, 7, 8, 15, 16, 18, and 19** Kang et al. teaches all that is required as explained above with reference to **claims 1, 2, 12, and 13**, however fails to teach that the reset signal inputted during the reset period is provided by increasing or lowering the electric potential of a capacitor storage lines by means of a signal inputted from a capacitor storage line driving circuit.

Kondo teaches that after applying drive signals to bring the EL elements to a light emission state, both ends of the holding capacitor (16) is connected to ground line (14) to make energizing of the EL element stop immediately before the light emission control

(see page 37, paragraphs 63-64), thereby providing a clear period by lowering the potential of the storage capacitor.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for the clear period wherein the storage capacitor line provides the storage capacitor with the signal being provided by the storage line driving circuit, as taught by Kondo, in a system similar to that which is taught by Kang et al. in order to thereby increasing the life of the display element while realizing high luminance with high efficiency.

Allowable Subject Matter

9. ***Claims 3, 6, 9, 14, 17, 20, 23, and 27*** are allowed.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nagaoka et al. (U.S. Patent No. 5,874,932) teaches a plasma display device capable of creating a screen of high quality without generating half tone noise in the succeeding frames.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is (703) 305-0143. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras can be reached on (703) 305-9720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Adam Adams", with a stylized flourish at the end.

adn/ADN
March 7, 2004